

# Master of Science in Chemistry

## Admission Requirements

The student must meet all criteria for admission to the Graduate School.

In addition, each applicant must have a GPA of at least 3.0 for all upper-division credits taken in the previous degree program (a B.S. or B.A. in Chemistry or Biochemistry).

Several courses are prerequisite for the M.S. degree programs; any student who has not yet met these requirements must take them as part of their M.S. program. These are:

1. one semester of calculus
2. one year of physics
3. one semester of inorganic chemistry
4. one year of organic chemistry
5. one semester of analytical chemistry
6. one year of physical chemistry

Many of these requirements must be completed prior to enrolling in specific MS-level courses. Credits earned in these undergraduate courses do not count toward the 30 credit requirement for the M.S. degree.

## Application Process

All applications for Fall admission to Chemistry must be submitted by April 1, and should include the following components, uploaded within the application form:

1. Unofficial/Official transcripts describing all post-secondary work. All official transcripts will be required if admitted.
2. A letter of intent describing your reasons for choosing our program, and how your personal strengths and goals align with your expectations of the program.
3. Three letters of recommendation, submitted through the application system, from professionals in the sciences or mathematics attesting to your potential to succeed in a graduate chemistry program.

## General Requirements

The M.S. programs include both thesis and non-thesis degree options, each of which requires a total of 30 graduate credits including 15 credits in 6600-level chemistry or chemistry-related courses, with specifics depending on the degree program. These credits are drawn primarily from among four core classes, CHEM 6609 (<http://coursecat.isu.edu/search/?P=CHEM%206609>), CHEM 6630 (<http://coursecat.isu.edu/search/?P=CHEM%206630>), CHEM 6655 (<http://coursecat.isu.edu/search/?P=CHEM%206655>), and CHEM 6671 (<http://coursecat.isu.edu/search/?P=CHEM%206671>), and all MS students are required to take 2 credits of seminar, CHEM 6601 (<http://coursecat.isu.edu/search/?P=CHEM%206601>). Each program of study must be approved by the student's committee, the Chemistry Department, and the Graduate School.

## Thesis Option

The thesis option emphasizes original research in a specific field and requires a substantial, original research project that culminates in a thesis and defense. Timely completion of this degree typically involves summer research in addition to the formal coursework outlined below. At least one of the core advanced courses is required, but others may, with committee approval, be replaced by other electives more relevant to a specific student's field of study. A minimum

total of 30 graduate credits is required, and a suggested schedule that maintains full-time status is outlined below:

Code	Title	Credits
CHEM 6630	Advanced Analytical Chemistry <sup>1</sup>	3
CHEM 6655	Advanced Physical Chemistry <sup>1</sup>	3
CHEM 6635	Masters Research	2-6
CHEM 6601	Seminar	1
Electives and/or Prerequisites		6
CHEM 6635	Masters Research	2-6
CHEM 6671	Advanced Organic Chemistry <sup>1</sup>	3
CHEM 6609	Advanced Inorganic Chemistry <sup>1</sup>	3
CHEM 6650	Thesis	1-10
CHEM 6601	Seminar	1
Electives		5
<b>Total Credits:</b>		<b>35-43</b>

<sup>1</sup> All but one of these courses may, with committee and chair approval, be replaced by other graduate electives.

## Non-Thesis Option

The non-thesis option emphasizes accumulation of broad chemical knowledge through coursework encompassing all fields of the discipline. Students may count no thesis credits and limited research credits toward this degree, and must complete a multi-part written exam and subsequent oral defense at the conclusion of the program. A minimum total of 30 graduate credits is required, and a suggested schedule that maintains full-time status is outlined below:

Code	Title	Credits
CHEM 6630	Advanced Analytical Chemistry <sup>1</sup>	3
CHEM 6655	Advanced Physical Chemistry <sup>1</sup>	3
CHEM 5581	Independent Problems in Chemistry <sup>2</sup>	1-4
CHEM 6601	Seminar	1
Electives and/or Prerequisites <sup>2</sup>		11
CHEM 6671	Advanced Organic Chemistry <sup>1</sup>	3
CHEM 6609	Advanced Inorganic Chemistry <sup>1</sup>	3
CHEM 6601	Seminar	1
Electives <sup>2</sup>		11
<b>Total Credits:</b>		<b>38</b>

<sup>1</sup> With the chair's approval one of these four courses may be replaced by another 6600-level coursework elective.

<sup>2</sup> Only 4 total credits in graduate research (among CHEM 5581, 5582, and CHEM 6635) may be counted toward the non-thesis degree requirements. After taking CHEM 6635 students are required to maintain continuous registration, including summer semesters, until graduation.